enzymes such as cellulase and decomposition with high temperature and pressure water. When utilizing starch or starch molasses as a raw material, the same processes as above are used. From the above raw materials, that is, used paper, vegetable lees produced during the pressing process, starch or starch molasses, various types of glucoses and maltooligosaccharides such as maltose (disaccharide) are obtained through the above described types of decomposition. In decomposition with enzymes, amylase etc. is used.

The polymer compounds constituting the resin composite of this invention are polyesters obtained by the ester reaction of saccharic compounds as polyhydric alcohols with bi-functional aliphatic compounds; therefore, they can be depolymerized through the hydrolytic cleavage of the ester linkage and provide saccharides and fatty acids as decomposition products. This indicates that, in the resin composite of this invention which consists of the above described polymer compounds, its molded forms and the waste thereof can be reused as the raw material. For the hydrolysis in the above cases, aqueous solution of sodium hydroxide or enzymes such as lipase and esterase are preferably used.

In the following the present invention will be described in further detail taking examples and comparative examples.

Example 1

System Containing Silicone Oil

10 g of glucose, 10 ml of silicone oil (SRX310, by Dow Corning Toray Silicone) and 30 ml of pyridine were mixed into 200 ml of dioxane, and the mixture was heated to 70°C in the nitrogen atmosphere while being agitated vigorously. Then 20 ml of sebacic acid chloride diluted with 100 ml of N, N-dimethylformamide was added dropwise to the mixture, and the mixture was agitated for 30 minutes to undergo copolymerization. The formed gel was water-washed three times and dried, to remove the solvent and the disused therefrom, as a result of which 18 g of colorless, rice cake-like solid, which was the resin composite of this example, was obtained.

Examples 2 to 6

A resin composite was synthesized in the same manner as Example 1, except that the raw material components were replaced with those shown in Table 1. As a result, a colorless or slightly yellowish rice cake-like solid was obtained in each example.

Table 1: Raw Material Components used in Examples 2 to 6

Example	Saccharic Compound	Bi-functional Aliphatic Derivative	Plasticizer
2	Glucose	Azelaic Acid Chloride	Silicone Oil (the same as that of Example 1)
3	Glucose	Hexamethylene diisocyanate	Silicone Oil (the same as that of Example 1)
4	Glucose	Sebacic Acid Chloride	Bulk Paraffin
5	Glucose	Sebacic Acid Chloride	Salad Oil
6	Maltose	Sebacic Acid Chloride	Liquid Paraffin

Example 7

System Containing an Excess of Fatty Acid

5 g of glucose and 30 ml of pyridine were mixed into 200 ml of acetonitrile, and the mixture was heated to 70°C in the nitrogen atmosphere. Then 20 ml of sebacic acid chloride diluted with 100 ml of N, N-dimethylformamide was added dropwise to the mixture, and the mixture was agitated for 30 minutes to undergo copolymerization. The formed gel was immersed in water for 12 hours, and then washed and dried, as a result of which 12 g of colorless, rice cake-like solid, which was the resin composite of this example, was obtained.

Example 8